

Applicant: Daniel SauFu Mui
Serial No.: 10/737,029
Filing Date: December 16, 2003
Docket No.: ZIL-568

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (original): A method comprising:
 - (a) receiving a keystroke indicator signal from a remote control device;
 - (b) generating a key code within a key code generator device;
 - (c) modulating said key code onto a carrier signal, thereby generating a key code signal; and
 - (d) transmitting said key code signal from said key code generator device.
2. (original): The method of Claim 1, wherein said key code signal is transmitted in (d) from said key code generator device to said remote control device.
3. (original): The method of Claim 1, wherein said key code signal is transmitted in (d) from said key code generator device to an electronic consumer device.
4. (original): The method of Claim 1, wherein said key code consists of a binary number.
5. (original): The method of Claim 1, wherein said key code comprises a binary number and timing information, and wherein said timing information defines how said binary number is modulated in (c) onto said carrier signal.

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6. (original): The method of Claim 1, further comprising:

(e) pressing a power-on key of said remote control device causing said remote control device to transmit said keystroke indicator signal that is received in (a), wherein said key code signal transmitted in (d) is received onto an electronic consumer device, and wherein said pressing in (e) causes said electronic consumer device to turn on.

7. (original): The method of Claim 1, wherein said carrier signal is in a radio frequency band, wherein said key code signal is received by said remote control device, and wherein said method further comprises:

(e) modulating said key code onto a second carrier signal, thereby generating a second key code signal, said modulating being performed on said remote control device wherein said second carrier signal is in an infrared frequency band; and

(f) transmitting said second key code signal from said remote control device to an electronic consumer device.

8. (original): The method of Claim 7, further comprising:

(g) pressing a power-on key of said remote control device causing said remote control device to transmit said keystroke indicator signal that is received in (a), wherein the pressing in (g) causes said electronic consumer device to turn on.

9. (original): The method of Claim 1, wherein said key code generated in (b) is part of a codeset, and wherein said remote control device does not store said codeset.

10. (original): The method of Claim 9, wherein said codeset comprises timing information and a plurality of key codes, and wherein said timing information describes a digital one and a digital zero.

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11. (currently amended): ~~The method of Claim 1A~~ A method comprising:

- (a) receiving a keystroke indicator signal from a remote control device;
- (b) generating a key code within a key code generator device;
- (c) modulating said key code onto a carrier signal, thereby generating a key code signal; and
- (d) transmitting said key code signal from said key code generator device,

wherein a codeset comprises a plurality of key codes, each one of said plurality of key codes corresponding to a function of an electronic consumer device, and wherein no more than a single one of said plurality of key codes is present on said remote control device at any given time.

12. (original): The method of Claim 11, wherein said function of said electronic consumer device is taken from the group consisting of: power on, power off, channel advance, channel back, volume up, volume down, cursor up, cursor down, cursor right, cursor left, select, play, record, stop, forward, back and pause.

13. (currently amended): A remote control device comprising:

a receiver that receives a first key code signal, wherein said first key code signal is generated by modulating a key code onto a first carrier signal, said first carrier signal falling within a radio frequency band;

a transmitter that transmits a second key code signal, wherein said second key code signal is generated by modulating said key code onto a second carrier signal, said second carrier signal falling within an infrared frequency band; and

a keypad that includes a key that corresponds to said key code, wherein said key code corresponds to a function of an electronic consumer device.

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14. (original): The device of Claim 13, wherein said key code corresponds to a second function of a second electronic consumer device, as well as to said function of said electronic consumer device.

15. (original): The device of Claim 14, wherein said transmitter transmits a third key code signal, and wherein said third key code signal is generated by modulating said key code onto a third carrier signal.

16. (original): The device of Claim 14, wherein said key code comprises a first binary number and a second binary number, said first binary number corresponding to said function, and said second binary number corresponding to said second function.

17. (currently amended): ~~The device of Claim 13~~A device comprising:

a receiver that receives a first key code signal, wherein said first key code signal is generated by modulating a key code onto a first carrier signal, said first carrier signal falling within a radio frequency band;

a transmitter that transmits a second key code signal, wherein said second key code signal is generated by modulating said key code onto a second carrier signal, said second carrier signal falling within an infrared frequency band;
and

a keypad that includes a key that corresponds to said key code, wherein said key code corresponds to a function of an electronic consumer device,
wherein said keypad includes a second key that corresponds to a second key code, wherein a third key code signal is generated by modulating said second key code onto a third carrier signal, wherein said third key code signal is received by said receiver, and wherein both said first key code and said second key code are not both stored in said device at the same time.

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18. (original): The device of Claim 13, wherein a codeset comprises timing information and a plurality of key codes, wherein each of said plurality of key codes corresponds to a different function of said electronic consumer device, wherein said key code is a binary number, and wherein said timing information defines how said binary number is modulated onto said first carrier signal.

19. (currently amended): A system comprising:

a key code generator device that generates a first key code and a second key code, wherein a codeset is stored on said key code generator device, said codeset including said first key code and said second key code, wherein said first key code corresponds to a selected function of a first electronic consumer device, and wherein said second key code corresponds to said selected function of a second electronic consumer device; and

means for relaying said first key code and said second key code from said key code generator device through a remote control device to said first electronic consumer device and to said second electronic consumer device without simultaneously storing both said first key code and said second key code on said ~~means~~remote control device.

20. (original): The system of Claim 19, wherein said selected function is taken from the group consisting of: power on, power off, channel advance, channel back, volume up, volume down, cursor up, cursor down, cursor right, cursor left, select, play, record, stop, forward, back and pause.

21. (original): The system of Claim 19, wherein said selected function is power on, and wherein said system automatically determines when said first electronic consumer device powers on.

22. (original): A remote control device, comprising:

an RF receiver;

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an IR transmitter; and

means for receiving a key code from said RF receiver and for sending said key code to said IR transmitter such that said key code is modulated onto an IR carrier signal, said IR carrier signal with said key code modulated thereon being transmitted from said remote control device by said IR transmitter.

23. (original): The remote control device of Claim 22, wherein said key code is not stored on said remote control device immediately prior to said means receiving the key code.

24. (original): The remote control device of Claim 22, wherein said means is a microcontroller.

25. (new): A method comprising:

- (a) receiving a keystroke indicator signal from a remote control device;
- (b) using said keystroke indicator signal to generate a key code, wherein a key code generator device generates said key code;
- (c) modulating said key code onto a carrier signal and thereby generating a key code signal;
- (d) transmitting said key code signal from said key code generator device to said remote control device, wherein said remote control device transmits said key code signal to an electronic consumer device.

26. (new): The method of Claim 25, wherein said key code generated in (b) is part of a codeset, and wherein said codeset is not stored on said remote control device.